

Remarks

With entry of these amendments, claims 1-13 and 22-50 are pending in this application, with claims 1, 10, 13, 23, and 26 being independent claims. By the foregoing amendments, claims 1, 2, 4, 10-13, and 22-26 are currently amended, and claims 31-50 are new claims. These changes are believed not to introduce new matter and their entry is respectfully requested.

1. *Rejection under 35 U.S.C. § 112*

Claims 11, 12, 24, and 25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner contends that the terms “ahead” and “behind” are relative terms which render the claims indefinite. In particular, the Examiner asserts that these terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In response, Applicant has amended claims 11, 12, 24, and 25, thereby removing the terms “ahead” and “behind” from the claims. Specifically, Applicant has removed the wording “at a point on a conveyor belt ahead of the scraper blade” from claims 11 and 24 as well as the wording “at a point on a conveyor belt behind the scraper blade” from claims 12 and 25. In place of the removed wording, Applicant has added the wording “toward the conveyor belt” to claims 11, 12, 24, and 25.

Applicant asserts that this new wording is not indefinite. “The test for definiteness under 35 U.S.C. 112, second paragraph is whether ‘those skilled in the art would understand what is claimed when the claim is read in light of the specification.’” MPEP § 2173.02 (quoting *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986)). “The fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph.” MPEP § 2173.05(b) (citing *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984)). Claims are allowable where they “define the patentable subject matter with a reasonable

degree of particularity and distinctness.” MPEP § 2173.02 (emphasis added).

Amended claims 11, 12, 24, and 25 thus specify that the liquid is sprayed “toward the conveyor belt.” Applicant asserts that a person skilled in the relevant art would understand what is claimed in these claims. Applicant asserts that amended claims 11, 12, 24, and 25 define patentable subject matter with a reasonable degree of particularity and distinctness, and that they are therefore not indefinite.

Withdrawal of the §112 rejection of claims 11, 12, 24, and 25 is therefore respectfully requested.

2. *Rejection under 35 U.S.C. § 102(b)*

Claims 1-9, 11, 21, and 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 4,105,109 (*Schultz*). Specifically, the Examiner asserts that *Schultz* discloses a scraper blade assembly comprising a pair of notched receiving members (see Figure 2) having a front vertical stabilizer (vertical portion to the right of the scraper blade 68) and a rear vertical stabilizer (the taller portion parallel to the front vertical stabilizer as seen in figure 2) within a mounting sub-assembly (lower portion of figure 2), a face plate (inwardly facing upper half portion of either vertical stabilizer, front or rear) extending between the pair of notched receiving members, parallel to the scraper blade (68) and flush with a portion of the scraper blade (68), a means for vertically adjusting the height of the scraper blade (68) so that the scraper blade is in contact with the conveyor belt surface (24), and a blade insert (area between 50 and 48 in figure 2) fixed within a blade housing (50 and 48). The Examiner further asserts that the vertically adjusting means further comprises a horizontal blade stabilizer (the lower most horizontal bar in figure 2), an adjustable lock bolt (54) extending upwardly through the horizontal blade stabilizer in communication with the bottom surface of the scraper blade (via 50, 56, 48 and 60), whereby the rotation of the lock bolt (54) allows for the vertical movement of the scraper blade (68). Finally, the Examiner asserts that *Schultz* discloses one or more adjustable screws (56) to removably secure scraper blade (68), a shield (76) attached to the scraper blade (68) extending from the scraper blade and over the blade support sub-assembly (see figure 2) and a means (78) for spraying a liquid on the conveyor belt (24) where the

liquid is sprayed at a point ahead of the scraper blade (68) and comprises a pipeline for transporting liquid having one or more nozzles in the proximity of the blade support sub-assembly, a means for restricting flow and a means for securing the pipeline (read column 5 lines 28-42 and column 6 lines 40-56).

In response, **regarding independent claim 1**, Applicant has amended claim 1 by adding the wording “and rigidly fixing” such that the third element of the blade support sub-assembly now reads “a means for vertically adjusting and rigidly fixing a height of the scraper blade in relation to a fixed position of said pair of notched receiving members and said face plate such that the scraper blade is in contact with a surface of the conveyor belt to be scraped.”

Applicant asserts that *Schultz* discloses a scraper blade assembly wherein each scraper blade (68) is individually biased in a dynamic manner toward a conveyor belt by an air filled bladder (60) that supports the scraper blade. *Schultz*, Col. 2, Lines 14-22, 40-42, 47-52; Col. 4, Lines 52-53, 59; Col. 5, Lines 50-53, 55-58, 67-68; Col. 6, Lines 1-2. In other words, each scraper blade dynamically moves up and down while cleaning a conveyor belt independent of any other scraper blades and independent of the pair of notched receiving members. Indeed, the thrust of the *Schultz* device is the provision of a dynamically moving scraper blade that floats up and down as it scrapes the conveyor belt while the remainder of the device remains fixed in position. The *Schultz* device teaches away from the use of a scraper blade that is fixed in relation to the remainder of the device as the *Schultz* device would not operate properly in such an configuration. Thus, one of the asserted advantages of the *Schultz* device is that the scraper blade fits loosely within the device for easy removal and replacement without requiring the loosening of any fasteners. *Schultz*, Col. 2, Lines 65-68; Col. 3, Lines 1-2, 32-35; Col. 6, Lines 30-33. Spacer bolts (56) are used to maintain the requisite space (A) for the scraper blade’s loose fit within the notched receiving members, thereby enabling the blade to “float” up and down during the cleaning process. *Schultz*, Col. 5, Lines 9-13.

In sharp contrast to *Schultz*, the present invention uses a scraper blade that, after vertical adjustment, remains fixed in position relative to the notched receiving members and the face plate. One of the features of the present invention is “vertical blade stabilizers on the notched receiving members for *anchoring* the scraper blade *securely in place*.” *Application*, Page 4, Lines 20-21 (emphasis added). The present invention is not designed to permit dynamic movement of the scraper

blade up and down in relation to the notched receiving members or face plate during the cleaning process. Thus, amended claim 1 now reads in pertinent part: “a means for vertically adjusting and rigidly fixing a height of the scraper blade in relation to a fixed position of said pair of notched receiving members and said face plate. . . .” (Emphasis added)

As the *Schultz* device does not disclose, and in fact teaches away from, a scraper blade being vertically adjusted and then rigidly fixed in relation to the position of the notched receiving members, Applicant asserts that the embodiment of the invention in claim 1 is patentably distinct from the *Schultz* device. Therefore, Applicant respectfully asserts that *Schultz* does not teach a scraper blade being fixed in relation to the position of the notched receiving members. Because *Schultz* does not teach this claim limitation, Applicant respectfully submits that amended claim 1 is not anticipated by *Schultz* and is in proper condition for allowance. *See, e.g.*, MPEP §2131; *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”); *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (“The identical invention must be shown in as complete detail as is contained in the ... claim.”); *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990) (the elements must be arranged as required by the claim).

In addition to the above, Applicant respectfully disagrees with the Examiner contention that the “rotation of the lock bolt (54) allows for the vertical movement of the scraper blade (68) [in the *Schultz* device].” Upon review of *Schultz*, it is readily apparent that the lock bolt (54) is used to rigidly fasten the angle member (48) and the channel member (50). *Schultz*, Col. 4, Lines 44-47; FIG. 2. The tightening or loosening of the lock bolt (54) does not raise or lower the scraper blade (68), but rather, results in a loose connection of the angle member (48) and the channel member (50) such that the channel member (50) would vibrate and wobble during use of the device. This in turn causes the scraper blade (68) to vibrate and wobble during use - foregoing any possibility that the scraper blade (68) is rigidly fixed during use as in Applicant device. Therefore, Applicant respectfully asserts that *Schultz* does not teach the use of a lock bolt (54) to raise and lower a scraper blade in such a manner that upon raising or lowering of the scraper blade, the scraper blade is rigidly fixed in the device during use. *Schultz* merely teaches the use of a locking bolt (54) to rigidly secure

two component pieces. Because *Schultz* does not teach this claim limitation, Applicant respectfully submits that amended claim 1 is not anticipated by *Schultz* and is in proper condition for allowance.

For the foregoing reasons, withdrawal of the §102(b) rejection of amended claim 1 is therefore respectfully requested.

Regarding claims 21 and 22, Applicant has canceled independent claim 21, thereby rendering the Examiner's rejection of this claim moot. Applicant also has amended dependent claim 22 to now depend from allowed claim 26. Thus, Applicant respectfully contends that dependent claim 22 is now in proper condition for allowance and requests that the Examiner remove the rejection of claim 22.

Regarding dependent claims 2-9, and 11, as well as new dependent claims 40-50, it is well established in patent law "that allowance of a parent or base claim as patentable normally results in allowance of a claim dependent upon that claim." *See* DONALD S. CHISUM, CHISUM ON PATENTS § 7.04[2]; *U.S. v. Telecommunications, Inc.*, 658 F. Supp. 579, 591, 3 USPQ2d 1571, 1580 (D. Colo. 1987), *aff'd in part and rev'd in part*, 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988), *cert. denied*, 109 S. Ct. 1954 (1989) ("Since it would not have been obvious to have made the invention defined in claim 1, ... it would not have been obvious to make the inventions defined in dependent claims 3, 4 and 5."); *In re Fine*, 837 F.2d 1071, 1076, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.").

Claims 2-9, 11, and 40-50 depend directly or indirectly from independent claim 1. As discussed above, Applicant respectfully submits that independent claim 1 is patentably distinguishable over the prior art, and thus are in proper condition for allowance. Since the embodiments of the invention claimed in independent claim 1 is not disclosed in the prior art, the prior art likewise does not disclose the embodiments of the invention defined in dependent claims 2-9, 11, and 40-50, which are narrower than independent claim 1 from which they depend. Applicant respectfully submits that claims 2-9, 11, and 40-50 are in proper condition for allowance.

Withdrawal of the § 102(b) rejection of claims 2-9, and 11, and any potential § 102(b) rejection of claims 40-50, is respectfully requested.

3. Rejection under 35 U.S.C. § 103(a)

Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Schultz*. Specifically, the Examiner asserts that although *Schultz* fails to show liquid being sprayed at a point on a conveyor belt behind the scraper blade, it would nevertheless have been obvious to one having ordinary skill in the art at the time the invention was made to move the position of the means for spraying a liquid from a position ahead of the scraper blade to a position behind the scraper blade in order to provide for a more thorough cleaning of the conveyor belt and also depending on which direction the conveyor is running, forwards or backwards.

In response regarding claim 1, Applicant reiterates the arguments made above wherein *Schultz* teaches away from the present invention. *Schultz* teaches a scraper apparatus wherein a bladed dynamically floats up and down within the notched receiving members when cleaning a conveyor belt. There is nothing in *Schultz* that discloses, teaches, or suggests the use of a blade rigidly fixed within notched receiving member. Furthermore, *Schultz* teaches the use of a lock bolt to hold two component pieces together. There is nothing in *Schultz* that discloses, teaches, or suggests the use of a lock bolt to vertically adjust the height of a scraper blade wherein after such adjustment the scraper blade is rigidly fixed in the device.

In sharp contrast, the apparatus of the present invention as set forth in amended independent claim 1 has a scraper blade rigidly fixed in relation to the notched receiving members and face plate. An operator may vertically adjust the scraper blade in relation to the notched receiving members and face plate prior to cleaning a conveyor belt. However, once the scraper blade is rigidly fixed in place, it does not move in relation to the notched receiving members and face plate when cleaning a conveyor belt. Therefore, not only is the present invention structurally vastly different from *Schultz*, but the present invention operates very different from *Schultz* during the cleaning process.

Accordingly, Applicant respectfully contends that the embodiment of the present invention claimed in amended claim 1 is not obvious in light of *Schultz*, thereby making claim 1 patentably non-obvious over *Schultz*. Thus, claim 12 being indirectly dependent from claim 1 is also nonobvious over *Schultz* and in proper condition for allowance. *See In re Fine*, 837 F.2d 1071, 1076, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (“Dependent claims are nonobvious under section 103

if the independent claims from which they depend are nonobvious.”).

Alternatively, in a further response regarding claim 12, Applicant respectfully asserts that *Schultz* in fact does not disclose “a means for spraying a liquid on the conveyor belt” as recited in claim 8, upon which claim 12 indirectly depends. *Schultz* does not disclose liquid being sprayed toward a conveyor belt or at a point on a conveyor belt behind the scraper blade. The Examiner asserts that *Schultz* discloses “a means (78) for spraying a liquid on the conveyor belt (24).” However, a careful examination of *Schultz* reveals the disclosure of an “air plenum” (78) that delivers an “intermittent air blast” directed “to accumulated material *on the blades*.” *Schultz*, Col. 5, Lines 34-42 (emphasis added). Thus, *Schultz* discloses a means for spraying *air* on the *scraper blades*, whereas claim 12, depending indirectly upon claim 8, comprises a means for spraying a *liquid* on the *conveyor belt*. *Schultz* does not even mention the term “liquid.” *Schultz*’s means (78) is used to “forcibly remove any particle build up that adheres to the scraper blades,” *Schultz*, Col. 2, Lines 62-64, whereas the means of claim 8 is used to “soften or remove debris from the conveyor belt” or to “treat the conveyor belt 504 for a special condition.” *Application*, Page 11, Lines 18-19, 25-26. *Schultz*’s air plenum (78) is therefore entirely different in structure and function from Applicant’s means for spraying a liquid.

Therefore, Applicant respectfully asserts that *Schultz* does not teach a means for spraying a liquid on the conveyor belt. Because *Schultz* does not teach this claim limitation, the Examiner’s assertion that it would have been obvious to one having ordinary skill in the art at the time the invention was made to *move* the position of the means for spraying a liquid is misplaced. Applicant asserts that it cannot be obvious to one having ordinary skill in the art at the time the invention was made to *move* the position of an element that is simply not disclosed at all in the prior art. One cannot move something that does not exist. Applicant respectfully submits that amended claim 12 is patentable over *Schultz* and is in proper condition for allowance.

Accordingly, Applicant respectfully contends that the embodiment of the present invention claimed in claim 12 is not obvious in light of the *Schultz* device, thereby making claim 12 patentably distinct. There is nothing in the *Schultz* patent to teach, disclose, or suggest the spraying of a liquid on a conveyor belt as employed in Applicant’s device. Therefore, Applicant respectfully requests the Examiner to withdraw any rejection of claim 12 for obviousness in light of the *Schultz* device.

Applicant further asserts in response that claim 12 depends indirectly from amended independent claim 1 which Applicant asserts is in proper condition for allowance. As discussed above, it is well established in patent law “that allowance of a parent or base claim as patentable normally results in allowance of a claim dependent upon that claim.” *See DONALD S. CHISUM, CHISUM ON PATENTS § 7.04[2]; U.S. v. Telecommunications, Inc.*, 658 F. Supp. 579, 591, 3 USPQ2d 1571, 1580 (D. Colo. 1987), *aff’d in part and rev’d in part*, 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988), *cert. denied*, 109 S. Ct. 1954 (1989) (“Since it would not have been obvious to have made the invention defined in claim 1, ... it would not have been obvious to make the inventions defined in dependent claims 3, 4 and 5.”); *In re Fine*, 837 F.2d 1071, 1076, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”).

Since the embodiment of the invention claimed in amended independent claim 1 is not disclosed in the prior art, the prior art likewise does not disclose the embodiments of the invention defined in dependent claim 12, which is narrower than independent claim 1 from which it depends. Applicant therefore respectfully submits that claim 12 is in proper condition for allowance.

Withdrawal of the § 103(a) rejection of claim 12 is respectfully requested.

4. *Allowable Subject Matter*

The Examiner states that claims 24 and 25 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph, and to include all of the limitations of the base claim and any intervening claims. Additionally, the Examiner provided the following statement of reasons for the indication of allowable subject matter of claims 10, 13, 23-26:

Dependent claims 10, 13 and 23-26 recite the structural limitations of a scraper blade support sub-assembly comprising a shield having one or more holes attached to the scraper blade for aligning the nozzles from the liquid spraying means through these holes and where the liquid is selected from the group consisting of water, a cleaning agent, a solvent, anti-freeze and a dust inhibitor, in combination with the rest of the recited structure in the independent claims and any intervening claims, clearly define over the prior art. Providing for a shield with holes allows the conveyor belt to be more thoroughly cleaned before and/or after the scraper blade

does its job and also allows for the support sub-assembly to be protected from the debris.

In response, Applicant has amended dependent claims 10, 13, 23, and 26 such that these claims are now independent claims that include all of the limitations of the base claims and any intervening claims. Specifically, amended claim 10 now includes all of the limitations of claims 1, 8, and 9; amended claim 13 now includes all of the limitations of claims 1 and 8; amended claim 23 now includes all of the limitations of claim 21; and amended claim 26 now includes all of the limitations of claim 21. Applicant therefore respectfully submits that claims 10, 13, 23, and 26 are in proper condition for allowance.

In addition, Applicant has amended claims 24 and 25 to overcome the rejection under 35 U.S.C. § 112, second paragraph, as explained above. As dependent claims 24 and 25 depend directly from claim 23, and as amended independent claim 23 has been rewritten to include all of the limitations of base claim 21 as suggested by the Examiner, Applicant asserts that the Examiner's objection to claims 24 and 25 has been rendered moot. Applicant therefore respectfully submits that claims 24 and 25 are in proper condition for allowance.

Withdrawal of the objection to claims 10, 13, and 23-26 is respectfully requested.

5. *New dependent claims 31-39*

Applicant has added new dependent claims 31-39 which all depend, either directly or indirectly, from allowed independent claim 26. As noted above, Applicant has rewritten claim 26 to be in independent form including all of the limitations of the base claim and any intervening dependent claim, thereby placing amended claim 26 in proper form for allowance. Accordingly, Applicant respectfully asserts that because new dependent claims 31-39 depend on allowed claim 26, claims 31-39 are also in proper condition for allowance.

6. *New dependent claims 40-50*

Applicant has added new dependent claims 40-50 which all depend, either directly or

indirectly, from allowable independent 1. As noted above, Applicant believes claim 1 is in proper condition for allowance in that claim 1 is neither anticipated by, nor obvious in light of, the *Schultz* device. Accordingly, Applicant respectfully asserts that because new dependent claims 40-50 depend on allowable claim 1, claims 40-50 are also in proper condition for allowance.

7. *Miscellaneous Corrections*

Applicant has amended dependent claim 2 such that its wording corresponds to the wording of independent claim 1 from which it depends. Specifically, the wording “and fixing a height of” as well as “in relation to a fixed position” have been added to claim 2, and the wording “within said notches” has been deleted from claim 2. Thus, the pertinent portion of claim 2 now reads, “The blade support sub-assembly according to claim 1, wherein said means for vertically adjusting and fixing a height of the scraper blade in relation to a fixed position of said pair of notched receiving members comprises a”

Applicant has amended dependent claims 11 and 12 such that they depend from claim 10 rather than from claim 9. Dependent claims 11 and 12 further limit the “shield” element. This element is not mentioned in claim 9, however it is mentioned in claim 10. Dependent claims 11 and 12 therefore properly depend from claim 10 rather than from claim 9.

Applicant believes that these amendments to claims 2, 11, and 12 merely correct inconsistent wording within the claims and do not add new matter. Their entry is therefore respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason,

that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Response is respectfully requested.

Respectfully submitted,

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